Missouri Department of Natural Resources

Silver Creek AgNPS SALT Final Report
(Randolph County)

Overview
Silver Creek lies in southwest Randolph County and is an area of moderately to steeply rolling hills. The major problem identified in Silver Creek and its tributaries was sedimentation and turbidity. Associated problems included excessive runoff from livestock feedlots, overgrazed pastures, grazed woodland, streambank erosion, sheet and rill erosion on cropland and homeowner rubbish dumped in ditches and streams. The project area of the county historically had low participation in district assistance programs. This prevailing mentality posed many challenges during the first years of the project.

Practices Offered
Practices offered were based upon need when the area was inventoried prior to project approval. Erosion control practices included terraces, grade stabilization structures (ponds), waterways, diversions, non-CRP grassland establishment, strip cropping, critical area treatment, contour farming and no-till planting. Other practices affecting water quality included planned grazing systems, filter strips and willow tree planting on ripairian areas. Other activities promoted were woodland management, wildlife management and informational/educational activities for adults and children.

Cost Shared Practices-Costs verses Benefits
Grade stabilization structures (ponds) were by far the most expensive practice when comparing dollars per ton of soil saved ($21.38/ton over 10 years). This figure is somewhat misleading considering it includes the cost of fencing and stockwater tanks which often adds 15-20% to the total cost of the structure. In addition, nearly all ponds are going to be in service for much longer than 10 years thus reducing the cost per ton. Other benefits are very difficult to calculate. In a pasture setting, a pond often helps distribute grazing more evenly and reduces erosion and runoff in high use areas. A pond can also improve stream health by allowing exclusion from or reducing stream damage by livestock loitering. All grazing systems installed in the project used cost share assisted ponds as the primary water source, thus reducing grazing system costs. In addition, several structures were build without cost share assistance at the choice of the landowner.

Terrace costs averaged $7.29/ton/10 years. As with ponds, most operators will maintain and use the terrace system much longer than 10 years.

Critical area treatments averaged $6.26/ton/5 years.

Non-CRP grassland establishment costs averaged $4.79/ton/5 years.

Non Cost Shared Practices

Info-ed

Information and education was an important part of the project for both adults and children. The philosophy was that while adults install best management practices (BMP's), children grow into adults who will install BMP's. With children, the idea was to help make them aware of their surroundings pertaining to soil, water, air, plant and animal communities. Five indoor/outdoor events were held for students. 174 school visits were made using an "Enviroscape" watershed model, ground water model and other "hands on" displays with students in 1st, 2nd, 4th and 6th grades. Demonstrations or talks also included groups such as FFA, Boy Scouts and Rotary. Other adult activities included a grazing school, pasture walk, prescribed burn school and a demonstration burn. The district's quarterly newsletter with a SALT section was mailed to residents. Other correspondence was made in a more personal manner such as brochures outlining upcoming events, availability of a practice suited for a specific individual and a "grazier's newsletter" for operators having or interested in planned grazing systems.

Technical assistance

Throughout the project we provided technical assistance to a number of ag and non-ag landowners. Some had little more than a house and a few acres in a rural setting while others qualified for financial assistance, but for personal reasons, would accept technical assistance but not financial assistance.

Summary

The most important thing we learned from this project is to expect the unexpected. Several times throughout the project we found if necessary to step back and re-evaluate our priorities and the direction we were heading. Over time, a number of farms were purchased for recreational purposes rather than agriculture production. This changed the type of landowner assistance request as well as the needs of the land, particularly concerning wildlife habitat management . Several non-participating farmers retired and rented their land to established farmers in the area that fortunately were conservation minded. This increased the requests for terrace and no-till assistance. Nearly every farmer in the area began having their pesticides applied by private applicators. This greatly reduced the need for sprayer calibration and operator education that was previously cited as needed. After several years of low prices, most hog producers stopped raising hogs commercially shortly after the project started. This effectively negated the nutrient runoff problems associated with confined swine production.

We had many successes, several disappointments and one outright failure. We found success can be a double-edged sword. The streambank stabilization with willow planting practice was a complete failure and was due to the success of the wildlife management practice. On several occasions District, NRCS and MDC personnel assisted a landowner that was managing his farm for wildlife. MDC personnel wrote a timber management plan, located and formulated seedings for food plots, was the lead partner in a well attended burn school, worked with NRCS on developing and conducting a grassland demonstration burn and District personnel provided technical assistance with repairing a failed dam and several eroding areas. All these efforts were successful beyond the expectations of those involved. The remaining problem area was an eroding streambank caused by earlier coal mining activities. It was decided that planting willows was the

most economical and environmentally friendly method of addressing the problem. Unfortunately, the farm had become such a wildlife haven that beaver moved in and completely destroyed willow plantings on two separate occasions. After the second time, the landowner abandoned the idea.

The District found the strongest point of the AgNPS SALT program is that of being flexible to meet the individual and changing needs of landowners. Project goals were adjusted several times during the life of the project. Practices that greatly exceeded original expectations included interseeding legumes into existing pastures (179%), terraces (245%), grade stabilization structures (230%), planned grazing systems (520%), personal contacts (219%), no-till planting (174%) school demonstrations (174%) and wildlife food plots (900%). Practices that did not meet original expectations included waterways, contour strip cropping, willow planting, woodland protection from livestock through fencing (0%), non-CRP grassland establishment (26%), stream monitoring (40%) and planned grazing field days (33%). Practices such as waterways were found to be highly dependent upon personal preference. Several eroding sites that could have used waterways were stabilized using other methods at the landowner's request. While quite satisfied with the number and quality of elementary school activities presented, we had hoped for more cooperation with high school student activities, namely stream monitoring. The lateness at which several grazing systems were completed prevented two planned field days from being held.

Overall, the project must be considered a success. Total goals for the project were revised upwards several times, meaning more progress was being made than originally planned. Requests for conservation practices are continuing and in the two weeks since the project ended have included two ponds, two terrace systems, one grazing system and one for wildlife management. This leads the district to believe the momentum the SALT project initiated will continue for some time to come.

The district believes the key to making the Silver Creek AgNPS SALT Project a success was a mixture of communication and credibility. It appears newsletters, brochures, radio spots and other forms of media presented to the general public had limited success. Personal letters proved far more worthy. Much of the success resulted from having competent personnel from several agencies working one on one with landowners. Especially important in the close knit community was having someone credible who had grown up in the county, had a recognizable name and was currently involved in production agriculture. Having someone who could say "This works for me" as opposed to "A book or some researcher says this should work for you" lent credibility to the goals and methods promoted with the project. Residents born and raised in the area tended to be wary of "fly by night" personnel that stay a short time and then move on up the corporate ladder. Landowners needed someone they could trust and depend upon to make suggestions or recommend personnel they didn't know. People that once seemed distant became most friendly, helpful and appreciative once you had their confidence. It should be noted that while the Randolph SWCD and its cooperating partners had a big part in the success of the project, it was the time, hard work, and money local landowners invested in their community that made the project truly a success.